

A NEW SPECIES OF *SMICRAULAX* FROM MEXICO, WITH KEY TO SPECIES OF THE GENUS (COLEOPTERA: CURCULIONIDAE)^{1, 2}

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ABSTRACT: A new species of *Smicraulax* Pierce is described from northcentral Mexico, increasing to three the number of species now known in the genus. These three weevils have all been found to be associated with species of *Phoradendron*. The generic description is modified to include the new species. A key is provided for identification and illustrations of diagnostic characters are provided.

DESCRIPTORS: *Smicraulax* Pierce, new species, generic description, key.

A third species of the anthonomine genus *Smicraulax* Pierce is described herein. The two previously known species are *Smicraulax tuberculatus* Pierce from Texas and *Smicraulax arizonicus* Sleeper from Arizona. The biology and taxonomy of the genus were reviewed by Burke and Hafernik (1971).

Smicraulax piercei n. sp.
(Figs. 1, 2, 4, 5, 8)

Body elongate-oval; length 2.70-3.07 mm, width 1.03-1.33 mm. Elytra moderately densely covered with white, yellowish, ochreous and black slender scales, forming distinct patterns as follows: triangular area of yellowish to ochreous scales at base of elytra bordered posteriorly on each elytron by a faint line of white scales extending obliquely from humerus to intersect suture near middle of elytra; elongate spot of black scales on each of intervals 1, 3 and 5 and another larger dark spot of scales on sutural intervals at about basal 1/3 of elytra; line of white scales on each elytron, each beginning on suture at declivity and extending obliquely forward to reach lateral edge of elytron just behind humerus. Broad, irregularly margined band of black scales extended across elytra at declivity behind which elytra are rather uniformly and densely covered with yellowish and ochreous scales. Pronotum with diamond-shaped patch of whitish and ochreous scales on disc; elsewhere on prothorax scales less densely distributed and not forming patterns. Ventrally scales not as densely arranged as above. Integument rufescent, somewhat mottled with darker areas. Bases of meso- and metafemora, apical 1/3 to 1/2 of all tibiae, and tarsi flavescent.

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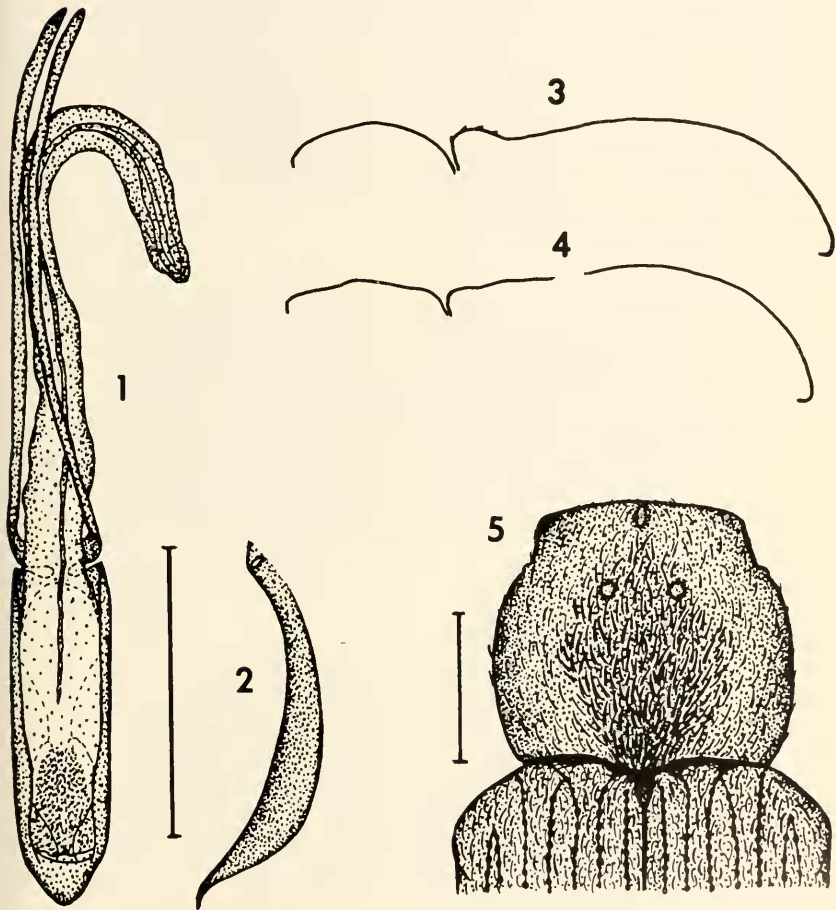
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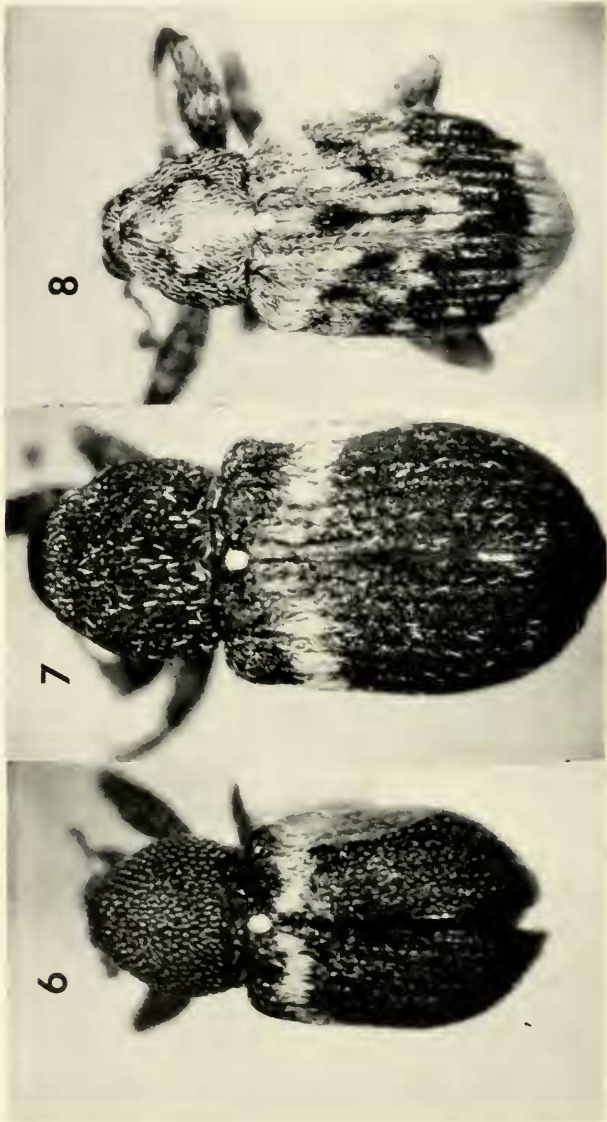
Rostrum stout, length equal to or slightly longer than prothorax, moderately and evenly curved; punctate-striate in basal 1/2, more strongly so in male, median carina in male; apical 1/2 of rostrum remotely and finely punctate in both sexes, more strongly shining in female, slender yellowish scales sparsely arranged along sides of basal 1/3 of rostrum; lateral rostral groove with entire upper margin and anterior 1/3 of lower margin well defined. **Antenna** of male attached just before middle and that of female nearer middle of rostrum; apical 1/3 of scape strongly clavate and bent outward, sparsely covered with pale recumbent scales. **Funicle** 7 segmented; segment 1 strongly clavate, length equal to approximately 2χ width, moderately densely covered with fine yellowish pubescence; segment 2 one-fourth longer than wide; 3 stouter with length equal to width, segments 4, 5 and 6 equal in size, each slightly wider than long; 7 same length as 6 but distinctly wider. **Club** stout, equal in length to preceding 6 funicular segments combined. **Head** sparsely clothed with elongate ochreous and a few intermixed white scales; scales more densely placed along dorsal margins of eyes and on vertex adjacent to anterior margin of prothorax; integument granulate-punctate; frons with deep median sulcus, concave between eyes. Eyes prominent, encroaching upon frons; separated in front by distance equal to about 1/2 width of rostrum at base. **Prothorax** (Fig. 5, 8) at widest point (just before middle) about 1.2χ wider than long; sides rounded gently from base to rather strong subapical constriction; bearing a median apical prominence which is shining and impunctate; also prominence on each side of the midline just before middle and another on each lateral margin at subapical constriction; occasionally other slightly raised areas present; elsewhere pronotum coarsely and closely punctate. **Elytra** (Fig. 5, 8) distinctly wider than prothorax at base; humeri oblique; sides parallel to about middle, then broadly rounded to apices; intervals moderately to strongly convex, 1, 3, 5 and 7 distinctly wider than others; striae deeply impressed. **Procoxae** contiguous. **Mesocoxae** separated by distance equal to about 1/3 width of a mesocoxa. **Abdominal sterna** only slightly convex; sternum 1 at middle 1.7χ longer than 2; sternum 2 about 1.7χ longer than 3; sterna 3 and 4 equal in length; sternum 5 slightly shorter than 4 in male, the two approximately the same length in the female. **Pygidium** with apex exposed in male, hidden in female. **Legs** short and stout; femora rather strongly clavate; profemur about 1.3χ width of either meso- or metafemur; femora each bearing a broad triangular tooth which is largest on profemur; protibia stout, slightly curved, inner margin moderately strongly sinuate; mesotibia less strongly sinuate on inner margin; metatibia with inner margin straight; meso- and metatibia each bearing a curved, sharply pointed uncus; metatibia mucronate. **Tarsi** with third segment broadly bilobed; tarsal claws each with a short tooth which extends to about middle of claw. Male genitalia as in Figs. 1, 2.

Type Material. Male holotype, female allotype and 4 male paratypes labeled as follows: Mexico, Nuevo Leon, 3 mi. S. Pacheco, July 3-4, 1974, W.E. Clark. This location is approximately 60 km. S.W. of Linares on Highway 61. These specimens were collected on *Phoradendron* sp. growing on *Juniperus* sp. The holotype and allotype are deposited in the U.S. National Museum of Natural History and the paratypes in the collection of the Department of Entomology, Texas A&M University.

This species is named for Dr. W. Dwight Pierce (1881-1967) in recognition of his contributions to the knowledge of North American Curculionidae. Specimens of the type series of *S. piercei* are fairly uniform in size, color and



Figs. 1-5 (line accompanying Figs. 1 and 2, and Fig. 5 equals 0.5 mm): 1. *S. piercei*, male genitalia, dorsal view; 2. lateral view of median lobe of same; 3. lateral view of dorsal outline of prothorax and elytra of *S. tuberculatus*; 4. same of *S. piercei*; 5. dorsal view of prothorax and base of elytra of *S. piercei*.



Figs. 6-8: Dorsal views of species of *Smicraulax*. 6. *S. tuberculatus*; 7. *S. arizonicus*; 8. *S. piercei* (holotype male).

arrangement of scales. This species is quite distinct from the other two members of the genus as indicated in the following key. In addition to the characters presented in the key, the male genitalia of *S. piercei* differ from those of *S. tuberculatus* and *S. arizonicus* by having the basal apodemes longer than the median lobe. *S. piercei* also has a flagellum which is present in *S. tuberculatus* and absent in *S. arizonicus*. Although these three species are obviously congeneric, *S. piercei* appears not to be closely related to the other two.

The inclusion of *S. piercei* in *Smicraulax* necessitates modification of some of the generic characters as presented by Burke and Hafernik (1971). The procoxae of *S. piercei* are contiguous while they are slightly separated in *S. arizonicus* and more widely separated in *S. tuberculatus*. Also, *S. piercei* does not have the base of the third elytral interval strongly elevated as in *S. arizonicus* and *S. tuberculatus*. The difference in the male median lobes was mentioned above. Otherwise, *S. piercei* possesses the characters of the genus as defined by Burke and Hafernik (1971).

The distributions of the three species of *Smicraulax* are allopatric. All three are known to be associated with species of *Phoradendron*, although only *S. tuberculatus* has definitely been shown to develop on plants of this genus.

Key to Species of *Smicraulax*

1. Prebasal transverse narrow elytral band of white to yellowish scales; elsewhere on elytra scales sparsely distributed and not strongly variegated in color; third elytral interval strongly elevated at base (Fig. 3); prothorax without low rounded prominences on anterior 1/2; procoxae slightly to widely separated 2.
Without narrow band of elytral scales; elytral scales dorsally moderately dense, with variegated color pattern; third elytral interval only slightly elevated at base (Figs. 4, 8); prothorax with low, rounded prominences on anterior half of prothorax (Fig. 5); procoxae contiguous; northcentral Mexico *piercei* n. sp.
2. Dorsal surface of body with scales uniform in size (Fig. 6); elytral fascia extending posteriorly along lateral edge of elytron; profemoral tooth narrow; procoxae moderately widely separated; central Texas *tuberculatus* Pierce.
Dorsal surface of body with broad and narrow scales intermixed (Fig. 7); elytral fascia not extending posteriorly along lateral edge of elytron; profemoral tooth broad; procoxae less widely separated; southeastern Arizona *arizonicus* Sleeper.

LITERATURE CITED

- Burke, H.R. and J.E. Hafernik. 1971. Biology and taxonomy of the genus *Smicraulax* Pierce (Coleoptera:Curculionidae). *Southwestern Natur.* 15:309-317.